INTEGRATED CIRCUIT DEVICES HAVING SELF-ALIGNED CONTACT STRUCTURES AND METHODS OF FABRICATING SAME

ABSTRACT OF THE DISCLOSURE

An integrated circuit device, e.g., a memory device, includes a substrate, a first insulation layer on the substrate, and a contact pad disposed in the first insulation layer in direct contact with the substrate. A second insulation layer is disposed on the first insulation layer. A conductive pattern, e.g., a damascene bit line, is disposed in the second insulation layer. A conductive plug extends through the second insulation layer to contact the contact pad and is self-aligned to the conductive pattern. An insulation film may separate the conductive pattern and the conductive plug. A glue layer may be disposed between the conductive pattern and the second insulation layer. The device may further include a third insulation layer on the second insulation layer and the conductive pattern, and the conductive plug may extend through the second and third insulation layers.